

Healthy Smiles for Life



BC's First Nations and Aboriginal Oral Health Strategy

March 2014



Tripartite First Nations Health Plan

Contents

Executive Summary	3
Introduction to the Strategy	6
Strategy Purpose	6
Strategy Goal	6
Strategy Objectives	6
Strategy Scope	7
Strategy Development Process	7
Strategy Overview	7
Background on Oral Health	8
Oral Health Disparity	8
Oral Health Care Context	9
First Nations and Aboriginal Health and Wellness	12
Barriers to Oral Health	12
Guiding Principles	14
Jumpstart for Oral Health	15
Strategic Directions	16
Strategic Direction 1: Oral Health Promotion	16
Strategic Direction 2: Prevention and Identification of Caries Risk	18
Strategic Direction 3: Access to Treatment	20
Strategic Direction 4: Leadership and Collaborative Action	23
Strategic Direction 5: Surveillance, Monitoring, and Evaluation	26
Strategic Direction 6: Human Resources	28
Conclusion	31
Recommendations	32
Definitions	36
Contributors	38
Appendix: Oral Health Care Providers in BC	39
References	40

Executive Summary

Oral health is essential to overall health and wellness. Children's oral health is significantly impacted by maternal oral health and the knowledge and oral health practices of caregivers and families. Aboriginal children in British Columbia (BC) have significantly poorer oral health than non-Aboriginal children, and First Nations children living on-reserve have even poorer oral health than Aboriginal children living off reserve.¹ Healthy Smiles for Life: BC's First Nations and Aboriginal Oral Health Strategy has been designed to guide public health and community efforts to improve the oral health of First Nations and Aboriginal children aged 0-18 and their caregivers in BC.

To address the goal of improved oral health for First Nations and Aboriginal children in BC, Healthy Smiles for Life was developed with four objectives in mind:

- Identify key promotion, prevention and treatment services to support improved oral health for First Nations and Aboriginal children and their caregivers and families, including pregnant and postpartum women.
- Identify barriers to accessing prevention and treatment services, and develop strategies to address these barriers.
- Increase knowledge exchange and support practices to improve oral health.
- Identify a human resource strategy to support prevention and treatment services.

Healthy Smiles for Life identifies five principles to guide collaborative work for improving oral health for First Nations and Aboriginal children in BC:

- **Health Equity.** Create equal opportunities for good oral health for all, and reduce disparities in oral health among population groups.²
- **Cultural Competence and Responsiveness.** Ensure that oral health care providers are culturally competent, and provide culturally responsive oral health promotion and prevention services.
- **Holistic Health and Wellness.** Promote oral health as part of a holistic health and wellness strategy. Shift from a sickness model to a wellness model.
- **Healthy Children, Healthy Families and Healthy Communities.** Recognize that Elders and other community members play an important role in the health of First Nations and Aboriginal children. Promote collective community efforts to foster equity, dignity and well-being for children and their families.
- **Working Together.** Establish strong communication and partnerships between First Nations and Aboriginal communities and public health oral health care providers. Foster community channels for reaching children and their caregivers and families.

Healthy Smiles for Life comprises six strategic directions that provide a comprehensive, multi-level, evidence-informed set of recommendations to consider when developing and coordinating oral health programs and policies:

1. Oral Health Promotion
2. Prevention and Identification of Caries Risk
3. Access to Treatment
4. Leadership and Collaborative Action
5. Surveillance, Monitoring and Evaluation
6. Human Resources

Community capacity and population needs will determine which recommendations within each of the six strategic directions can be implemented at the regional and the local level.

Three next steps are required for moving Healthy Smiles for Life forward:

1. Confirm the tripartite lead for the implementation of the strategy.
2. Develop an implementation plan.
3. Develop a dissemination plan.

Implementation of this strategy requires continued collaboration between the tripartite partners, as well as strong community involvement. As it “takes a community to raise a child,” collective community efforts are essential in ensuring the success of this strategy and in improving the oral health of First Nations and Aboriginal children.



Introduction to the Strategy

Strategy Purpose

The purpose of Healthy Smiles for Life: BC's First Nations and Aboriginal Oral Health Strategy is to guide the delivery of collaborative public health and community services that are targeted at improving the oral health of First Nations and Aboriginal children aged 0-18 and their families in British Columbia (BC). The strategy provides a comprehensive, evidence-based and multi-level set of recommendations that can inform public health and community planning, policy development and program implementation. The strategy can be viewed as a stepping stone to collaborative action.

Strategy Goal

The goal of Healthy Smiles for Life is to improve oral health for First Nations and Aboriginal children and their families in BC. Aboriginal children in BC have significantly poorer oral health than non-Aboriginal children, and First Nations children living on-reserve have even poorer oral health than Aboriginal children living off reserve.³

This goal fits within a larger tripartite effort to improve health for First Nations and Aboriginal peoples across BC, as identified in the 10-year Tripartite First Nations Health Plan, which was signed in 2007 by the First Nations Leadership Council, the Government of British Columbia and the Government of Canada.⁴ As part of this plan, "First Nations health services will be delivered through a new governance structure that leads to improved accountability and control of First Nations health services by First Nations."⁵ The First Nations Health Authority (FNHA) has been established to support BC First Nations to implement the mandate set out in the Tripartite First Nations Health Plan that seeks to elevate health outcomes for BC First Nations people.⁶ The vision of FNHA is "Healthy, Self-Determining and Vibrant BC First Nations Children, Families and Communities."⁷ The goal of improved

oral health for First Nations and Aboriginal children and their families supports the FNHA vision.

Strategy Objectives

Children's oral health is significantly impacted by maternal oral health and the knowledge and oral health practices of their caregivers and families. Exchanging oral health knowledge and fostering oral health practices among pregnant and postpartum women, caregivers and families are foundational to improving children's oral health. Creating healthy public policies and establishing nurturing environments in which families live, work and play will support the goal of improved oral health for children.

To address the goal of improved oral health for First Nations and Aboriginal children in BC, Healthy Smiles for Life was developed with four objectives in mind:

1. Identify key promotion, prevention and treatment services to support improved oral health for First Nations and Aboriginal children and their caregivers and families, including pregnant and postpartum women.
2. Identify barriers to accessing prevention and treatment services, and develop strategies to address these barriers.



3. Increase knowledge exchange and support practices to improve oral health.
4. Identify a human resource strategy to support prevention and treatment services.

Strategy Scope

Oral health services within the scope of this strategy include those delivered by BC health authority public health staff, the Children's Oral Health Initiative (COHI), dental therapists and partnering agencies. Treatment provided by private practice dentists is not within the scope of this strategy.

Strategy Development Process

Development of a strategy to improve the oral health of First Nations and Aboriginal children was identified as a priority by the Tripartite First Nations Aboriginal Maternal Child Health Strategy Table and Planning Committee. A working group was formed to develop the strategy and comprised representatives from First Nations communities from each region, FNHA, Health Canada's First Nations and Inuit Health Branch, the BC Ministry of Health and BC regional health authorities. Healthy Smiles for Life is the result of the working group's efforts.

Strategy Overview

Healthy Smiles for Life contains four major sections: Background; Guiding Principles; Jumpstart for Oral Health; and Strategic Directions. The Background section provides information about the oral health status of BC's Aboriginal children; explains the context in which oral health services are provided in BC; identifies gaps in oral health care for First Nations and Aboriginal children and families; explores the concepts of First Nations and Aboriginal health and wellness as contributors to oral health; and identifies potential barriers to oral health. The Guiding Principles section describes a

shared set of principles that are intended to inform the collaborative work outlined in the strategy. The Jumpstart for Oral Health section identifies three key behaviours that families, care providers and communities can encourage and promote to support early improvements in oral health. The more comprehensive Strategic Directions section details six key directions to guide the delivery of First Nations and Aboriginal oral health services:

1. Oral Health Promotion
2. Prevention and Identification of Caries Risk
3. Access to Treatment
4. Leadership and Collaborative Action
5. Surveillance, Monitoring and Evaluation
6. Human Resources

Each strategic direction contains recommendations for developing and coordinating oral health programs and policies. Community capacity and population needs will determine which recommendations within each strategic direction can be implemented at the regional and the local level.



Background on Oral Health

Oral Health Disparity

Oral health is essential to overall health and wellness. The primary dental diseases of concern in BC are dental caries and periodontal disease. Dental caries, or tooth decay, is an infectious and transmissible disease that children often acquire from a primary caregiver before age 3.⁸ Childhood prevention is important to ensuring long-term reduction in dental caries. Caries in children can lead to serious infection, chewing problems, poor nutrition, oral surgery and decreased self-esteem.⁹ It can also lead to misalignment and crowding of permanent teeth.¹⁰ Pain related to caries can affect children’s ability to sleep, as well as their ability to concentrate and learn. Periodontal disease includes a cluster of diseases that result in inflammatory responses and chronic destruction of the tissues that surround and support the teeth. Periodontal disease has been explored as a potential contributing factor in a number of conditions including diabetes, respiratory disease, heart disease, preterm birth and low-birth-weight babies.¹¹

There is significant disparity between the oral health of First Nations and Aboriginal people and that of non-Aboriginal people in BC, as indicated in surveys such as the 2009-2010 First Nations Oral Health Survey (FNOHS), which examined the oral health of eight First Nation communities across Canada.¹² The

survey sample was designed to be representative of First Nations across the country. Table 1 compares some of the results of the FNOHS with those of the 2007-2009 Canadian Health Measures Survey.¹³ The Canadian Health Measures Survey used a sample representative of the whole population of Canada.

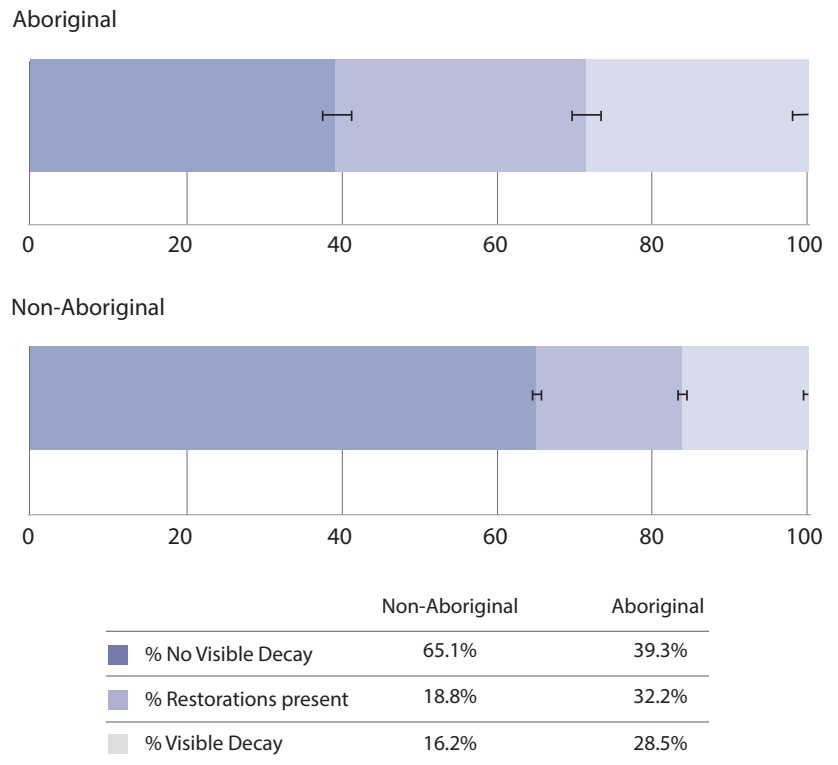
Table 1: Comparison of oral health of First Nations children and overall Canadian child population

	2009-2010 First Nations Oral Health Survey	2007-2009 Canadian Health Measures Survey
Children aged 6-11 whose primary caregiver reported that the child's teeth are brushed twice a day or more frequently	52.2%	70.6%
Children whose primary caregiver reported that the child had avoided foods because of problems with teeth in the past 12 months	29.3% (3-11 years)	7.6% (6-11 years)
Children aged 6-11 who had at least one decayed, missing or filled primary tooth (DMFT)	80.4%	47.8%
Adolescents aged 12-19 who had at least one decayed, missing or filled permanent tooth (DMFT)	91.4%	58.8%
Mean number of decayed, missing or filled permanent teeth for adolescents aged 12-19	6.15	2.49

The FNOHS demonstrates that First Nations children across the country have barriers to oral health. The results of a 2009-2010 provincial dental survey of kindergarten children across the BC are consistent with the FNOHS results.¹⁴ Health authority dental staff conducted the survey to measure the dental health of kindergarten-age children across BC. A total of 35,420 children participated in survey, including 2,219 Aboriginal children attending public and independent schools and 226 First Nations children attending 33 First Nations schools. The survey results confirm that First Nations and Aboriginal children in BC have poorer oral health than non-Aboriginal children. Figure 1 compares the percentages of Aboriginal and non-Aboriginal children in kindergarten who had (1) no visible decay and no existing restorations, (2) existing restorations and (3) evidence of visible decay. While 16.2% of the non-Aboriginal children had evidence of visible decay (caries), 28.5% of the Aboriginal children had evidence of visible decay. In addition, 8.8% of these Aboriginal children had evidence of decay in three or four quadrants of the mouth, compared with 3.7% of the non-Aboriginal children.

The 2009-2010 provincial dental survey of kindergarten children in BC confirmed that First Nations children attending First Nations schools have even poorer oral health than Aboriginal children attending public or independent schools. Only 18.1% of the First Nations children attending First Nations schools had no evidence of visible decay and no existing restorations, compared with 41.5% of the Aboriginal children attending public or independent schools. Furthermore, 34.5% of the First Nations children attending First Nations

Figure 1: Percentages of no visible decay, restorations present and visible decay in Aboriginal¹ and non-Aboriginal kindergarten-age children in BC (95% confidence intervals displayed)



Source: From Dental survey of Aboriginal kindergarten-aged children 2009-2010: A provincial and First Nations school analysis (p. 10), by BC Ministry of Health Services, 2011. Retrieved from <http://www.health.gov.bc.ca/women-and-children/pdf/kindergarten-aboriginal-dental-survey.pdf>. Copyright 2011 by BC Ministry of Health Services. Reprinted with permission.

schools had evidence of current visible decay compared with 27.9% of the Aboriginal children attending public and independent schools, with 9.3% of these First Nations children having evidence of decay in three or four quadrants of the mouth.

Historical and socio-economic factors have contributed to the disparity between the oral health of First Nations and Aboriginal people and that of non-Aboriginal people in BC.

Oral Health Care Context

Oral Health Care in Canada

The primary avenue for oral health care in Canada is the private practice model on a fee-for-service

¹Includes both Aboriginal children attending public and independent schools and First Nations children attending First Nations schools.



basis. These services are financed primarily through private insurance, including coverage through some employers, and out-of-pocket spending. Eligible oral health treatment services for registered First Nations and Inuit people is available through the Non-Insured Health Benefits (NIHB) Program.

Public Health Oral Health Care Services in BC

In addition to the private practice oral health care model, BC's health authorities provide public health oral health care programs that focus on the promotion of oral health and the prevention of early childhood caries.

The type of oral health prevention programs provided by health authority public health in BC may include fluoride varnish programs; caries risk assessments; kindergarten screening; and preventive education for prenatal women, parents and children. Public health dental services are provided by registered dental hygienists (RDHs), certified

Vancouver Public Health Dental Clinic

Unique in the province, Vancouver Coastal Health Authority has one public health dental clinic. This clinic provides oral health information, advice to parents and caregivers on preventing decay, and some treatment services for children with no dental coverage.

Source: Vancouver Coastal Health. (n.d.). Vancouver Public Health Dental Program [brochure]. Retrieved from <http://vch.eduhealth.ca/PDFs/FJ/FJ.114.D434.pdfz>

dental assistants (CDAs) and some dentists (these professions are described in the Definitions section on page 36). See the Appendix for a list of key services that are within the scope of practice for each of these professionals.

Oral health messaging and information are also disseminated through public health nurses, other public health staff and community stakeholders. Public health dental staff work with community agencies to raise awareness of oral health and support the development of guidelines in preschools, schools and community settings for dental healthy snacks, healthy eating and infant feeding practices, and consumption of low-sugar and non-acidic beverages.

Additional Oral Health Care Services for First Nations

The FNHA currently delivers the Children's Oral Health Initiative (COHI) within some First Nations communities. COHI services were transferred to FNHA from Health Canada's First Nations and Inuit Health Branch (FNIHB) in 2013. COHI focuses on children from birth to 7 years, and provides education to parents/caregivers and pregnant women. Services for children include annual screening, caries risk assessments, fluoride varnish applications, provision of sealants and temporary fillings using a procedure known as alternative restorative treatment (ART). Oral health education and information kits include messaging about maintaining good oral hygiene, eating healthy foods, and reducing the frequency of sugary drinks and sticky snacks.

COHI emphasizes community involvement. Bands are given the funds to hire community members to act as COHI Aides. These COHI Aides serve as an ongoing oral health "presence" in the community and support the oral health professionals. The COHI Aides apply fluoride varnish and provide oral health information during one-to-one discussions with children and families. The COHI Aides play a

vital role in the success of the program and help to ensure that cultural and local factors are considered in the provision of COHI education, prevention and treatment services. For a summary of key services provided by COHI Aides, see the Appendix.

Some First Nations communities have on-reserve dental clinics. Clinics may or may not be currently in use, and may range from a temporary chair to one or more permanent chairs. Dental prevention and treatment services in these clinics may be delivered by a dental hygienist, dental therapist or dentist, depending on the clinic. These clinics are located in FNHA-funded health centres, with FNHA providing all equipment and instruments. The bands pay the operational expenses for the clinics, and the dental professional using the facility provides the consumable supplies. Services offered at on-reserve dental clinics vary depending on the oral health care provider working at the clinic.

Gaps and Issues in Oral Health Care Services for First Nations and Aboriginal Children and Families

First Nations living on-reserve currently receive a mix of oral health preventive programs delivered through FNHA, the five regional health authorities and some First Nations bands. Not all First Nations communities have access to oral health preventive programs or receive the same level of services.

In July 2011, the BC Ministry of Health, the regional health authorities and FNIHB conducted an environmental scan of oral health services available both on and off reserve for First Nations and Aboriginal children from birth to 7 years of age in BC. The environmental scan confirmed that oral health preventive services for First Nations

COHI in Gwa'sala-Nakwaxda'xw First Nation

"The COHI program has brought more education and awareness to our families and our staff/home visitors. The dental health in our community has improved, with fewer children being sent to the specialist in Nanaimo. The work of the COHI Aides is awesome; they go over and above the duties required. They are organized and they too have more awareness of community needs.

"The program has changed them and has brought out the strengths in them to be able to carry out what is required of the program. I am grateful to have been given the chance for our community to take part in such an amazing program. I definitely love what the program has to offer our children and families."

– Health Director, Gwa'sala-Nakwaxda'xw First Nation (Port Hardy)

and Aboriginal children vary considerably by type and frequency, and vary in terms of who provides the services. It also confirmed that in a number of First Nations communities, oral health preventive services are not offered. Key needs for improving oral health among First Nations and Aboriginal children and families include the following:

1. Access to promotion, prevention and treatment services for all First Nations and Aboriginal children and families in BC. Barriers to access are discussed on page 14.
2. Strong leadership and collaborative action between health authorities, COHI and communities.

Dental Caries in Pre-Contact Coastal BC

Samples of teeth from prehistoric and early historic sites across the BC coast indicate a very low frequency of caries (less than 1%). The diet of coastal populations consisted primarily of meat and fish and was very low in starches and sugars.

Source: Cybulski, J. S. (1990). Human biology. In W. Shuttlles (Ed.), *Handbook of North American Indians*. Vol. 7 Northwest Coast (pp. 52-59). Washington, DC: Smithsonian Institution.



3. Standardized indicators to support monitoring and evaluation of program outputs and oral health outcomes.
4. A human resource strategy taking into account (a) the specific needs of communities and (b) the skill set and scope of practice of each type of oral health care provider.

First Nations and Aboriginal Health and Wellness

The foundation of Aboriginal culture is the interrelationship between the physical, spiritual, mental and emotional aspects of life. Each individual's wellness is inclusive of her/his family, community and Nation and her/his connection to the environment in which she/he lives (land, animals, water).

Culture refers to beliefs, values, traditions and customs that are passed down from generation to generation but also evolve over time. Culture has been identified as a protective factor for First Nations and Aboriginal health. The protective factor concept refers to conditions that build strength and

resilience. Improvements in any aspect of physical health, such as oral health, need to work within a cultural perspective of wellness.

The following are examples of practice within cultural perspectives:

- Connections to the land. Harvesting plant and animal foods from the local environment is a key part of traditional culture. In addition to the benefits of healthy eating, harvesting local foods can encourage physical activity, provide stress relief and foster a spiritual connection to the land. Connection to the land can help individuals maintain health and well-being.
- Inclusion of traditional foods. Traditional diets do not include sugary beverages or sticky processed foods, which contribute to dental decay.
- Use of traditional language. Research suggests that the use of Indigenous languages is a "strong predictor of health and wellbeing in Canada's Aboriginal communities."¹⁷ Language is a powerful symbol of culture and identity.
- Involvement of family and community members. Involving the community in the development of an oral health program allows for exploration into traditional oral health practices. Communities are then able to incorporate their beliefs and establish ownership of the program.
- Inclusion of spiritual practices. Incorporating spiritual practices contributes to health and well-being.¹⁸

Barriers to Oral Health

Some First Nations and Aboriginal people may face barriers to good oral health. Barriers can exist at the individual level, at the community level and at the broader systemic level. Table 2 lists some examples of potential barriers.

Table 2: Potential barriers to good oral health

INDIVIDUAL BARRIERS

- Lack of knowledge regarding oral health care and the importance of oral health
- Lack of knowledge regarding healthy food choices and healthy infant feeding practices
- Inability to access or afford healthy foods
- Lack of transportation to oral care services
- Anxiety or fear of dental procedures or previous negative experiences with oral health care or treatment
- Cost of dental services
- Transiency
- Perceived inability to change oral health
- Behaviours that do not support oral health
- Low income
- Low level of education

COMMUNITY BARRIERS

- Remote location (distance to dental or dental specialist offices)
- Lack of funding to support community programs and facilities
- Lack of human resources to support on-reserve oral health care
- Community food insecurity
- Perceived lack of community capacity to facilitate change

BROADER BARRIERS

- Impacts of historical events including lack of trust¹⁹
- Challenges accessing dental insurance or benefits for both oral health care providers and their patients
- Differences in health models (a biomedical model versus a holistic model of health)
- Transition from traditional foods and food practices to mainstream foods and food practices
- Food pricing
- Some limitations to scope of practice for dental therapists and dental hygienists
- Limitations to where dental therapists can practice (on reserve but not off reserve)

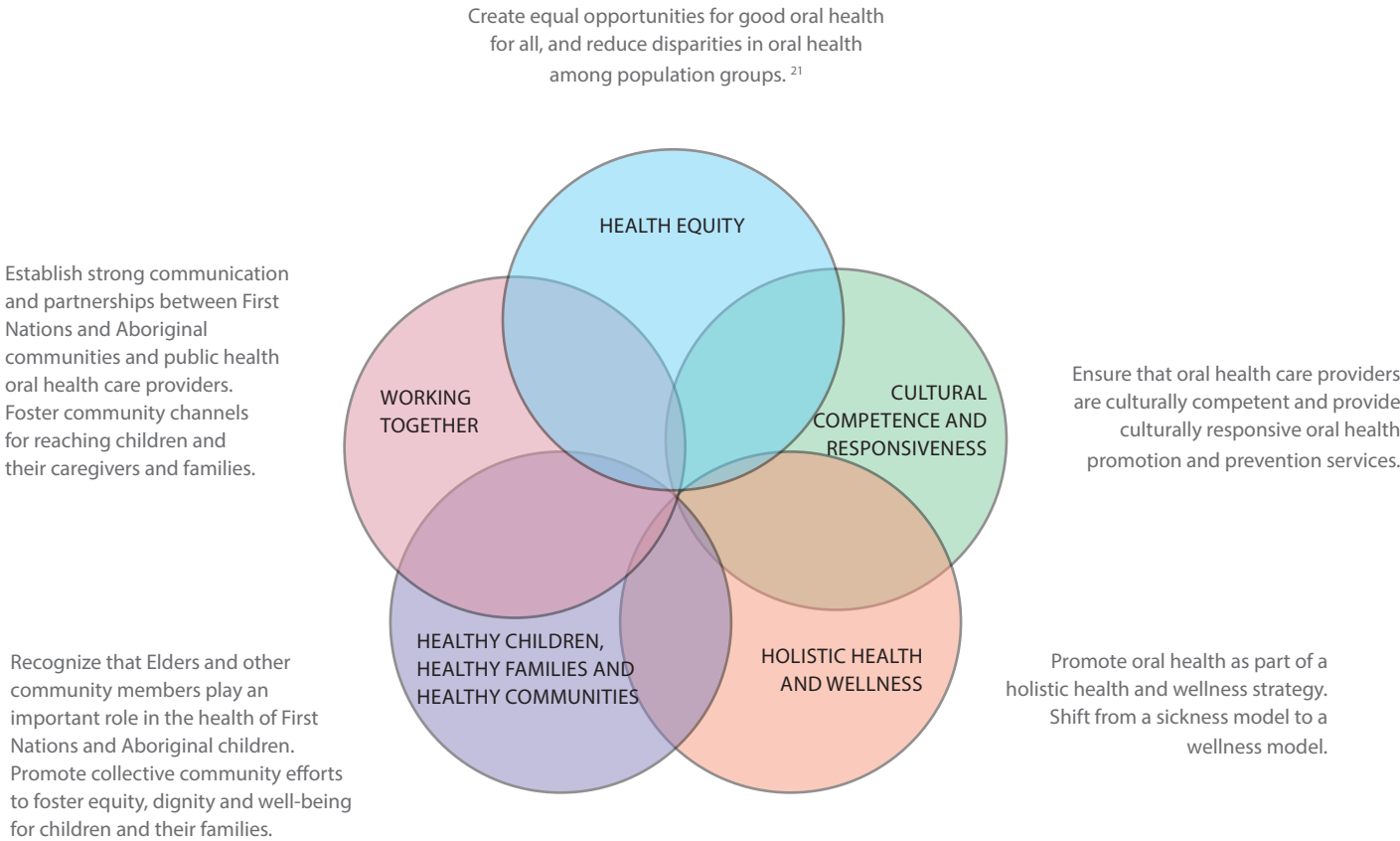
The potential barriers listed in Table 2 need to be considered when developing resources and programs that aim to improve the oral health of First Nations and Aboriginal children, their caregivers and their families.



Guiding Principles

The guiding principles in Table 3 represent a shared understanding of how tripartite partners, public health staff and community partners can best work together to improve the oral health of First Nations and Aboriginal children and their caregivers and families in BC. These principles were developed by the working group to guide the implementation of the recommendations in Healthy Smiles for Life.

Table 3: Five guiding principles for implementing the First Nations and Aboriginal Oral Health Strategy



Jumpstart for Oral Health

To jumpstart oral health, communities, families and care providers can promote and encourage the following behaviours: brush daily with fluoride toothpaste; reduce intake of sugary beverages; and visit a dental professional for regular care.

Communities and care providers can promote these key messages right away while they work toward implementing the more comprehensive recommendations found in the next section (Strategic Directions).

Community-Driven Promotion Messages



Brush daily with fluoride toothpaste.



Reduce intake of sugary beverages.



Visit a dental professional for regular care.

Sip Smart! BC™

Sip Smart! BC™ is an educational program that helps teach children in grades 4 to 6 about reducing the intake of sugary drinks and about making healthy drink choices.

Sip Smart! BC™ was created and developed by the British Columbia Pediatric Society and the Heart and Stroke Foundation, with funding from the BC Healthy Living Alliance.

Source: British Columbia Pediatric Society. (n.d.). Welcome. Retrieved from <http://dotcms.bcpeds.ca/sipsmart/welcome/>

Strategic Directions

Strategic Direction 1: Oral Health Promotion

Health promotion is the process of enabling people to increase control over and to improve their health.²² Oral health is a vital component of overall health and wellness, and individual practices that support good oral health are essential for all populations. Foundational to improving oral health is knowledge exchange, which may be encouraged through oral health promotion.

For First Nations and Aboriginal people, oral health promotion efforts should be focused within the context of families and communities. Families and communities with shared languages, values, beliefs and traditions are essential elements in First Nations and Aboriginal health and wellness.²³ The health of First Nations and Aboriginal children is intricately connected to the health of pregnant and postpartum women, and the knowledge and practices of caregivers, families and communities. The saying

“it takes a community to raise a child” rings true for many First Nations and Aboriginal families.

Health promotion involves empowering people and communities to act. It enables communities to collectively address the social determinants of health and create positive change. Social factors that influence the health of First Nations and Aboriginal people include community identity, social connectedness, social status, historical context, employment, income, education, health literacy and geographic location.²⁴

The First Nations Health Authority is committed to moving to a wellness model that reflects an Indigenous approach to health, incorporating physical, spiritual, emotional and mental wellness.²⁵ In keeping with this commitment, a shift from a sickness model to a wellness model is needed when addressing oral health. This shift involves moving from a reliance on secondary treatment, such as filling cavities, performing root canals and pulling teeth, to undertaking health promotion and primary prevention.²⁶

Collaborating with other health care providers, such as physicians, nurses and midwives, is another significant avenue for promoting oral health among First Nations and Aboriginal communities. The BC Perinatal Health Program Obstetric Guideline 19: Maternity Care Pathway, a best practice guideline for physicians and midwives who offer maternity care in BC, states that

Promotion with Puppets

“A few years ago we created a puppet theatre and our own puppets. We took our show ‘DeeKay Sugar Bugs’ on the road to the various preschools in the Mission/Chilliwack area. It was a hit! The children loved the puppet show. We ended the show with a little talk afterward to discuss the importance of [maintaining] oral hygiene and reducing sugar intake.”

– Dental Therapist, Stó:lo Nation

Involving Grandparents

“We conducted oral health sessions with grandparents and other adults and they appreciated the information provided. Many responded with ‘I didn’t know!’ Some of the grandparents have gone on to make changes in what drinks and snacks they provide for their grandchildren and have asked for toothbrushes to keep at their place for when their grandchildren come over.”

– Dental Therapist, Stó:lo Nation



during the first or subsequent prenatal visits, the health care provider should discuss the importance of both maintaining good oral hygiene and accessing preventive dental services early in the pregnancy.²⁷ Integrating oral health promotion into existing services is recommended.

The following Oral Health Promotion recommendations will contribute to the goal of improving oral health for First Nations and Aboriginal children and their caregivers and families in BC:

- 1.1 Promote oral health as part of a holistic, healthy living strategy:
 - Work with other health care providers to incorporate oral health promotion into their practice (e.g., physicians, nurses and midwives).
 - Work with Elders and community stakeholders to promote oral health within other healthy living initiatives and within community culture and celebrations.
- 1.2 Promote oral health awareness and oral health practices through knowledge exchange. Provide culturally relevant oral health education:
 - For communities as a whole
 - For pregnant and postpartum women, caregivers and families of children, and children up to 18 years of age
 - For health care providers who work or may work with Aboriginal populations.
- 1.3 Use multidisciplinary promotion efforts that are integrated into other programs and settings such as Aboriginal Head Start programs, public health immunization, public health and community home visiting programs, maternal child health programs and Fetal Alcohol Spectrum Disorder (FASD) programs – for example:



- Implement dental-healthy snack and food policies.
- Establish juice-free events/zones and sugary beverage policies.
- Develop tobacco control policies.
- Distribute oral hygiene products (fluoride toothpaste, brushes, floss).

Oral health promotion efforts must be developed in collaboration with First Nations and Aboriginal communities, to ensure the efforts are relevant and to increase the role of communities in promoting oral health. Opportunities to integrate oral health promotion into existing health promotion and preventive programs should be explored.

Collaborating with Community Programs to Promote Oral Health in Fraser Health Authority

“Collaborating with Aboriginal teen programs and family drop-in centres has been an effective way to meet families, build relationships, and provide oral health promotion messaging to pregnant women and families with infants and preschool and school-age children.”

“I attended a Head Start program where preschool Aboriginal children were provided with both a nutritious meal and a ‘brush-in’ where the children’s teeth were brushed with fluoride toothpaste. This provided the opportunity to have the children’s teeth brushed and exposed to fluoride 5 days a week throughout the entire school year.”

– Dental Staff, Fraser Health Authority

Strategic Direction 2: Prevention and Identification of Caries Risk

Prevention literally means to stop a disease from occurring or progressing. Primary prevention of caries includes assessing the oral health of populations of interest, supporting and improving oral hygiene practices, reducing the transmission of oral bacteria that cause dental decay, applying fluoride varnish and applying sealants for school-age children.

Fluoridation of community or school drinking water is another effective primary prevention strategy. This population intervention has been used for over 60 years to prevent dental decay and has been endorsed by more than 90 national and international government and health organizations, including Health Canada, the Canadian Public Health Association, the Canadian Dental Association, the

Canadian Medical Association and the World Health Organization. Water fluoridation benefits the entire community regardless of age or socioeconomic status. Everyone who consumes the water, or consumes foods and beverages prepared with the water, automatically receives the benefits. Benefits do not depend on the availability of professional dental services or the ability to afford them. Extensive research has consistently demonstrated the safety and effectiveness of water fluoridation in the prevention of dental caries. However, significant barriers to fluoridation implementation need to be explored and addressed.

Secondary prevention activities include screening and the early detection of disease.

The following Prevention and Identification of Caries Risk recommendations will contribute to the goal of improving oral health for First Nations and Aboriginal children and their caregivers and families in BC:

- 2.1 Assess prenatal clients' knowledge of oral health, provide anticipatory guidance for oral health care and refer for dental care as needed:
 - Provide oral examination and assessment of oral hygiene practices and knowledge.
 - Provide oral health information through motivational interviewing and in alignment with cultural beliefs and Indigenous knowledge.
 - Provide oral hygiene supplies (brushes, fluoride toothpaste, floss).

Playful Prevention

"I always try to encourage a positive learning experience for the kids. One time I was applying fluoride varnish to a family with three children and I asked, 'Who wants to be my assistant?' They all instantly cried, 'I do, I do, I do!' So I enlisted their help as my water assistant, my fluoride-holding assistant and my patient. They switched jobs as each child's teeth were varnished. They were full of questions and happy to receive their varnish. Afterward they relayed how they had been my special assistants."

– COHI Aide, Lower Nicola

Prevention through Community Gatherings

"I have found myself screening children and applying fluoride at all kinds of community events. I attend baby circles, family circles, health fairs, career fairs, traditional baby naming ceremonies and barbecues. I find the more time we spend in the communities, the more we are invited and welcomed to gatherings. I also regularly visit all the daycares, nurseries, Head Start programs and schools on-reserve."

– COHI Dental Hygienist, Kamloops



- Consider/establish a program to distribute decay preventive products (e.g., Xylitol gums, fluoride rinses).
 - Facilitate access to oral health care.
- 2.2 Offer regularly scheduled caries risk assessments to identify infants and children at risk of decay, and provide one-to-one parent and caregiver education and other supportive strategies to reduce risk:
- Facilitate knowledge exchange of oral hygiene practices for First Nations and Aboriginal children, caregivers and families.
 - Consider/establish a program to distribute decay preventive products (e.g., Xylitol gums, fluoride rinses) for mothers and caregivers.
- 2.3 Assess infants and preschool age children for dental health and provide preventive services during routine health contact, including both public health and primary care:
- Include oral health assessment and information for parents/caregivers.
 - Provide anticipatory guidance on dental health (e.g., teeth eruption, oral hygiene and transfer of oral bacteria, healthy snacks, feeding practices).
 - Provide oral hygiene supplies (brushes, fluoride toothpaste, floss).
 - Offer brushing programs.
 - Support awareness and uptake of the first dental visit.
 - Offer fluoride varnish programs.
- 2.4 Provide school-age preventive services:
- Embed oral health education in broader health information and education.
 - Establish school-based policies for healthy snacks and reduction of sugary and acidic beverages.
- Develop school brushing programs (provide oral hygiene supplies: brushes, fluoride toothpaste and floss).
 - Offer sealant programs.
 - Offer fluoride programs (e.g., varnish or rinse).
- 2.5 Provide community-based preventive services:
- Establish community-based policies for healthy snacks and reduction of sugary and acidic beverages, including in early childhood program settings.
 - Promote community awareness of oral health and Indigenous practices to support oral health.
 - Promote community celebrations for caries-free children.
- 2.6 Explore options for community or school water fluoridation:
- Identify opportunities for and barriers to fluoridation.
 - Facilitate community awareness of the benefits of fluoridation.
 - Explore community infrastructure to support fluoridation.
 - Explore resources and training required to facilitate fluoridation.



Strategic Direction 3: Access to Treatment

Access to treatment is part of a continuum of care that begins with the promotion of oral health and the prevention of and identification of caries risk. Promotion and prevention efforts are essential to reducing the need for treatment. When treatment is required, it should not occur in isolation of promotion and prevention activities.

Financial, geographic, legislative, jurisdictional and social barriers may limit access to private practice care for First Nations and Aboriginal populations in

BC. For more information about these barriers, see page 12. Coordinating and enhancing public health oral health care delivery is essential to improving access for First Nations and Aboriginal children and their caregivers and families.

Promotion in a Clinic Setting

“In our dental reception area we have 12 small jars filled with varying amounts of sugar. Behind each jar is a common drink container. The sugar amount in the jar is based on the amount of sugar in each drink. Each jar is marked with the amount of sugar in teaspoons. Young and old alike are shocked by the amount of sugar in drinks they thought were healthy. This visual display of sugar amounts has been a great learning tool for families.

“We also have a ‘cavity-free wall’ where pictures of children who have no cavities at their recall appointment are displayed. After 4 months we have a draw and one of the children wins a child-size electric toothbrush. It is a great incentive and the kids always have fun looking for pictures of siblings and friends.”

– Dental Clinic Manager, Stó:lô Nation

To address access to treatment or service coverage, alternate dental care delivery models could be considered. For example, there may be opportunities to coordinate the different skill sets of certified dental assistants (CDAs), registered dental hygienists (RDHs) and dental therapists, to maximize the ability of dentists to focus on treatments that require a higher level of specialty. Each oral health care provider plays a role and has a legal scope of practice that defines this work. The Appendix summarizes the key services provided by oral health care providers in BC.

Oral health treatment services for registered First Nations and Inuit people are funded through the Non-Insured Health Benefits (NIHB) Program. Coverage for NIHB dental services is determined on an individual basis, taking into consideration the current oral health status, recipient history, accumulated scientific research and availability of treatment alternatives. Service providers are encouraged to bill the NIHB Program directly so

Qwemtsin Dental Clinic

“The Qwemtsin Dental Clinic in Kamloops offers dental services to band members on an average of 2 days a month. These dental services include examinations, x-rays, basic restorative treatment, extractions and periodontal maintenance therapy. Many of the clients we see have not had dental care in years and are often in a lot of pain. Being that we are located on reserve and that the clients do not have to pay for services up front allows for a greater number of clients to be treated.”

– Dental Hygienist, Qwemtsin Dental Clinic



that recipients do not face charges at the time they receive the health care goods or services, which could be a barrier to receiving care. However, some dental providers require payment at the time of service, which requires patients to seek reimbursement from the NIHB Program. The NIHB Program includes only limited preventive services; therefore, it should be considered as one component of a continuum of care that includes oral health promotion and disease prevention.

Based on information collected in 2011, approximately 50 First Nations communities have on-reserve dental operatories (clinics).³⁰ These clinics range from a temporary chair to one or more permanent chairs. Some operatories may or may not be in use, with the most common reason for a clinic not being fully utilized being a lack of dental professionals to provide service in a community. If the clinic is in use, services may be provided by a dental hygienist, dental therapist or dentist. Exploring community needs, service provider needs and options for the use of dental operatories is recommended.

The following Access to Treatment recommendations will contribute to the goal of improving oral health for First Nations and Aboriginal children and their caregivers and families in BC:

- 3.1 Explore alternate dental care delivery models, and coordinate dental staff to support access to oral health care and basic restorative services.
 - Explore opportunities to coordinate the different skill sets of certified dental assistants (CDAs), registered dental hygienists (RDHs), dental therapists, denturists and dentists.

Leveraging Skill Sets in COHI

"It was evident early on in COHI in BC that there would not be enough dental therapists to provide COHI in all communities. Partnerships were developed with health authority dental hygienists who had community health experience, as well as a deep concern for the First Nations children in their areas. Dental therapists work closely with these dental hygienists, providing the COHI sealants and ART, as current legislation limits the ability of hygienists to provide these services.

"As a result, both dental professions have come to understand and value what the other brings to the program, and this is a fine example of problem solving and collaboration to better the health of clients and improve access to care."

– COHI Coordinator

- 3.2 Enhance public health oral health care in clinic, school and community settings as appropriate:
 - Cleaning and scaling
 - Fluoride application
 - Sealant application
 - Alternative restorative treatment (ART)
 - Extraction of primary (baby) teeth
 - Fillings and restorations.
- 3.3 Facilitate greater access to oral health treatment:
 - Explore options for salaried dental professionals.
 - Explore community needs, human resource needs and options for dental operatory clinics.
 - Consider medical transportation as needed
 - Explore opportunities for dental health professionals other than dentists and denturists to bill for insurable services.

Alternative Dental Care Delivery in Alaska

The Alaska Native Tribal Health System's dental health aide therapist (DHAT) model is a team-based approach aimed at increasing accessibility of dental services in rural and remote areas. Since 2006, teams consisting of a dentist and a DHAT have been assigned to provide basic care in some isolated communities. DHATs live and work in the communities, while supervising dentists operate out of regional hub clinics. Dentists customize their practice protocols to reflect the skills of the DHATs and the needs of the communities. The DHATs provide prevention and basic oral health services, allowing the dentists to focus on services that require more specific training. The dentist-DHAT teams increase accessibility to services by performing more local care and increase efficiency by allowing each provider to work at the top of her/his skill set.

Source: Willard, M. (2012). The Alaska Native Tribal Health System Dental Health Aide Therapist as a dentist-centric model. *Journal of the American College of Dentists*, 79(1), 24-28.



Strategic Direction 4: Leadership and Collaborative Action

To improve oral health among First Nations and Aboriginal children and families, health authorities, COHI and communities need to work together in providing leadership and collaborative action for oral health promotion, prevention and identification of caries risk, and access to treatment. Leadership and collaborative action involve strategic planning, consultation and collaboration, and development of public policy.

First Nations and Aboriginal people must be involved in the planning for and development of resources and policies, as well as the delivery of programs to improve oral health. The Transformative Change Accord: First Nations Health Plan states that “First Nations must be more involved in decision-making regarding their health and well-being, and must be involved in health planning, the delivery of health services and the monitoring of health outcomes.”³¹ Incorporating Indigenous Knowledge into oral health resources and programs and facilitating knowledge exchange between oral health care providers and First Nations and Aboriginal communities will help empower communities to take a leadership role in oral health.

By drawing on Indigenous knowledge and facilitating knowledge exchange, community leaders can involve families and communities in promoting health and wellness. Change begins with recognizing that Aboriginal people are the experts on their own lives. Oral health professionals have a key role in helping to build the confidence of their clients by providing good information and support so that Aboriginal people can make informed decisions. As part of this process, health leads and other community leaders can be advised about the importance of oral health, and community members can be enlisted and trained to provide prevention services. Health promotion efforts may



Precious Smiles in the Interior Health Authority

“The Precious Smiles Program at Snc’c’amala?tn Early Childhood Education Centre and School is a terrific example of community partners working together to improve the dental care of children. Community dental staff, the band community health nurse, the centre and school staff, and the school principal were involved in planning the program. The program includes healthy snacks and lunch for children at the centre, a no-juice policy, an after-lunch brushing program and fluoride varnish clinics. Centre staff promote the clinics, which occur every 3 months, to parents.

“The band community health nurse assists dental staff with the clinics and provides follow-up for children in need of treatment if the parent is not present at the appointment. Children are also given a take-home sheet to inform parents of the dental check findings and after-varnish care. Community dental staff attend special event days to promote the program.”



be more effective when they are delivered by trusted community members and integrated into existing community activities.

Leaders and community members can also play a significant role in changing community norms. For example, a number of communities are giving out healthy snacks instead of candies at children's events. Community leaders such as Chiefs, band counsellors and Elders have a special role to play in modelling and talking about good oral health practices. Many communities have recognized the value of this role and enlisted their Chiefs and other leaders to lead initiatives such as stop smoking campaigns and fitness programs. Other community members who may take a leadership role in promoting oral health include school teachers and principals, child care providers, primary care providers and others who work with children.

In addition to ensuring that First Nations and Aboriginal communities are involved in the development of policies to support oral health, it is recommended that other key stakeholders are consulted with or partnered with, such as the College of Dental Hygienists of British Columbia, the College of Dental Surgeons of British Columbia, the British Columbia Dental Hygienists' Association and the British Columbia Dental Association.

Engaging Community Leaders

"I have learned that when I deliver oral health promotion in communities, it is crucial to engage the Chief, Council and Elders. When the entire community is part of the oral health conversation, relationships and families strengthen and I am able to see an increase in positive parental oral health behaviours."

– Dental Hygienist, Fraser Health

The following Leadership and Collaborative Action recommendations will contribute to the goal of improving oral health for First Nations and Aboriginal children and their caregivers and families in BC:

- 4.1 Include First Nations and Aboriginal communities in planning and developing resources and policies, and in delivering programs:
 - Incorporate Indigenous knowledge into resources, policies and programs.
 - Facilitate knowledge exchange, build partnerships between oral health care providers and First Nations and Aboriginal leaders and community members, and enlist community champions.
 - Enlist and train community members to provide prevention services.
- 4.2 Leverage existing policies that support oral health, or develop and promote implementation of new policies to support oral health, such as:
 - Healthy food policies
 - Tobacco control initiatives
 - Taxes on sugar-sweetened beverages and confectionary goods.
- 4.3 Strengthen community capacity to support oral health and develop partnerships with key community members:
 - School teachers and principals
 - Child care centre staff
 - Primary care providers, support workers and health educators
 - Other community members who work with pregnant women, families and children aged 0-18.



Words from a Community Health Director in Iskut

"Iskut is a small Tahltan First Nations community, located 520 km from Terrace, BC. Our community began receiving dental therapy services in 2001. Prior to that, each year a large number of children under age 5 were being sent to Terrace for dental surgery under general anaesthetic. This treatment included pulling the decayed front baby teeth and having all remaining decayed teeth capped with stainless steel crowns.

"Our dental therapist established a regular oral health program that included teaching families about oral hygiene and about nutrition and the risks of long-term bottle feeding. As well, she trained a local person to provide fluoride varnish and to provide educational resources to the community.

"There has been a huge reduction in the need for children to be treated under general anaesthetic in Terrace. In 2010-2011, not one Iskut child needed this treatment, and now there are even teens who have had no cavities. Having a dental therapist has significantly improved the health of our community!"



Strategic Direction 5: Surveillance, Monitoring and Evaluation

Surveillance in public health is defined as “the ongoing and systematic collection, analysis, and interpretation of outcome-specific data for use in planning, implementing, and evaluating public health practice.”³² The surveillance and monitoring of oral health outcomes and trends help in identifying population needs, informing public health program planning and allocating resources to areas of identified need, where those needs can be addressed through preventive programs. Monitoring trends and changes in the oral health status of children, prenatal women and families within different regions is necessary to ensure population needs are being met in a culturally meaningful and cost-effective manner, and to inform the adaptation of programs to better meet these needs.

Evaluating the progress toward the goals of the First Nations and Aboriginal Oral Health Strategy requires the establishment of standardized indicators for systematically monitoring both oral health program outputs and oral health outcomes. An example of an oral health program output is the number of children who received fluoride varnish.

An example of an oral health outcome is a reduction in the prevalence of caries due to the application of fluoride varnish. Outcomes are estimated using indicators, such as the number of children who are caries free. It is important to develop valid indicators that are meaningful to the communities from which data are gathered.

Standardized indicators should be a component of an evaluation framework that is designed to facilitate the monitoring of trends between regions and the evaluation of the effectiveness of multiple prevention strategies. It is recommended that an overall evaluation framework be developed for the First Nations and Aboriginal Oral Health Strategy. In addition, any oral health program should have its own evaluation framework.

Currently, BC has limited data on both oral health program outputs and oral health outcomes for First Nations and Aboriginal children and their caregivers and families. Additional data can be obtained by (1) coordinating timely access to existing health authority dental program and assessment data, COHI service and clinical assessment data, and Non-Insured Health Benefits datasets, (2) conducting oral health surveys, such as the

Provincial Kindergarten Dental Survey

BC’s regional health authorities conduct a provincial dental survey of kindergarten children every 3 years to determine the rates and severity of dental decay in young children. In 2009-2010, the survey included 2,219 Aboriginal children attending public and independent schools and 226 First Nations children attending 33 First Nations schools. The results have informed public health program planning and have provided evidence of the need and rationale for a First Nations and Aboriginal Oral Health Strategy.

Subsequent kindergarten surveys will be important for monitoring trends between communities, identifying changes in the oral health status of First Nations and Aboriginal children, and evaluating the effectiveness of multiple prevention strategies.

BC Ministry of Health Services. (2011). Dental survey of Aboriginal kindergarten-aged children 2009-2010: A provincial and First Nations school analysis. Retrieved from <http://www.health.gov.bc.ca/women-and-children/pdf/kindergarten-aboriginal-dental-survey.pdf>.



provincial dental survey of kindergarten children, and (3) exploring opportunities for community-based research. It is also recommended that a central data system be adopted to collect information on public health clinical care and service delivery for oral health programs and prevention activities. This data system would support ongoing client care and follow-up, as well as the monitoring and evaluation of program outputs and outcomes.

All data must be collected in accordance with First Nations Health Information Governance.ⁱⁱ

The following Surveillance, Monitoring and Evaluation recommendations will contribute to the goal of improving oral health for First Nations and Aboriginal children and their caregivers and families in BC:

5.1 Monitor the oral health of First Nations and Aboriginal children and their caregivers and families:

- Establish documentation and reporting standards.
- Develop indicators that are meaningful to First Nations and Aboriginal people and determine a baseline and targets for each indicator in collaboration with the Tripartite Health Indicators Planning Committee, Strategic Health Knowledge and Information.
- Coordinate access to health authority public health dental programs and COHI and NIHB datasets.
- Conduct dental screening or surveys, and monitor trends and changes.

- Collect data in accordance with First Nations Health Information Governance and in consultation with community members.
- Work with First Nations and Aboriginal people to ensure that reporting on oral health trends is done in a culturally relevant manner.
- Explore opportunities for community-driven research.

5.2 Monitor and evaluate progress within all oral health programs:

- Establish an evaluation framework as one component of all oral health programs.
- Collect data in accordance with First Nations Health Information Governance.
- Develop an information management system for monitoring oral health program outputs and outcomes and client care.
- Work with First Nations and Aboriginal people to ensure that reporting on evaluation results is done in a culturally relevant manner.

5.3 Evaluate progress toward the goals of the First Nations and Aboriginal Oral Health Strategy:

- Establish an overall evaluation framework for the First Nations and Aboriginal Oral Health Strategy.
- Work with First Nations and Aboriginal people to ensure that reporting on the progress of the First Nations and Aboriginal Oral Health Strategy is done in a culturally relevant manner.
- Use evaluation results to inform program planning and allocation of resources.

ⁱⁱA process in which First Nations in BC have access to First Nations data and are influential in decision-making regarding the culturally appropriate and respectful collection, use, disclosure and stewardship of that information.

Strategic Direction 6: Human Resources

Moving the first five strategic directions of this First Nations and Aboriginal Oral Health Strategy forward requires human resource planning. Four main types of human resource issues need to be considered: (1) the specific needs of communities, (2) the number and type of oral health care providers required, (3) the geographic distribution of providers and (4) the training of oral health care providers.³³

Improved access to oral health care has been identified as a need in First Nations and Aboriginal communities in BC. Ensuring the cultural competency of oral health care providers is essential to improving access to care. This need can be addressed by: (1) providing cultural competency training to oral health care providers who work or may work with First Nations and Aboriginal populations and (2) incorporating cultural competency training into the curriculum design for oral health care training programs.

Promotion of Oral Health Careers

“Some First Nations COHI Aides have pursued further training and are developing careers in dental assisting, dental hygiene and other health professions. There is interest among COHI Aides in the possible reopening of a dental therapy school in Canada.”

– COHI Coordinator

Indspire

Indspire is a national charity dedicated to supporting First Nations and Aboriginal peoples, especially youth, to achieve their potential. Funding opportunities for students pursuing oral health care careers may be available. For more information see www.indspire.ca.

This improved access to oral health care for First Nations and Aboriginal communities also requires adequate numbers of oral health care providers. Collaboration among oral health care providers and integration of services are necessary to ensure an appropriate continuum of care within the context of community size, location and need.

It is a commitment of The Transformative Change Accord: First Nations Health Plan³⁴ to increase the number of trained Aboriginal health care professionals. Promoting oral health care careers in First Nations and Aboriginal communities and high schools will help achieve that commitment. Opportunities for scholarships or bursaries for First Nations and Aboriginal students pursuing oral health care careers should be investigated.

There may also be opportunities for laddering or mentoring Aboriginal oral health care professionals, such as supporting a dental assistant to become a dental hygienist, or a dental hygienist to become a dental therapist or vice versa.³⁵

Developing strategies for recruiting and retaining oral health care providers in First Nations and Aboriginal communities is essential in improving access to oral health care services. The remote location of many communities poses a significant challenge in ensuring the appropriate distribution and retention of human resources. As discussed in strategic direction 3, in



order to expand service coverage, alternate dental delivery models could be considered. In addition, options for salaried and contracted oral health care professionals could be explored.

Incorporating work experience in First Nations communities into oral health care training programs may improve the recruitment and retention of oral health care providers. Opportunities for practicum placements for dental residents and dental hygienists in First Nations communities should be explored. Considering a community service year in remote locations for new dentists is also suggested. Placements in remote locations require careful planning and nurturing of the work sites, to maintain a supportive learning environment.

Exploring training options for new dental therapists is recommended. The profession of dental therapy was developed to reduce barriers to access to care for underserved populations.³⁶ Promoting and supporting the professional of dental therapy in BC is important in improving access to care for First Nations and Aboriginal populations. In 2011, Canada's only dental therapy school, the National School of Dental Therapy, was closed due to loss of

Dental Residents in the Haida Gwaii

In collaboration with Health Canada and the Haida Gwaii First Nations community, the University of British Columbia opened the Skidegate Dental Clinic in the Haida Gwaii. Dental residents provide culturally relevant and comprehensive oral health care, including promotion, prevention and treatment services, to residents of Skidegate and Old Masset.

Source: UBC Faculty of Dentistry. (n.d.). Skidegate Community Program. Retrieved from <http://www.dentistry.ubc.ca/GPR/CommunityPrograms/Skidegate/default.asp>

Brighter Smiles in Hartley Bay (Gitga'at)

Hartley Bay (Gitga't) is a First Nations village 135 km south of Prince Rupert that is accessible by boat or float plane only. Brighter Smiles is a health education partnership between the community of Hartley Bay, UBC Faculty of Dentistry and UBC Department of Pediatrics in the Faculty of Medicine. This program has two goals: (1) to provide students in the pediatric program with work experience in a small, isolated First Nations community and (2) to improve health services for the children in Hartley Bay. Paediatric residents visit Hartley Bay on a rotational basis to deliver medical care, assess the teeth of the children and provide oral health education.

The partnership between the Faculties of Medicine and Dentistry, as well as between the paediatric residents and the community, is an excellent example of working and learning collaboratively.

Source: Harrison, R.L., MacNab, A.J., Duffy, D.J. & Benton, D.H.J. (2006). Brighter Smiles: Service learning, inter-professional collaboration and health promotion in a First Nations community. *Canadian Journal of Public Health*, 97(3), 237-240

federal funding. At this stage, it is uncertain whether a new dental therapist training program or programs will emerge in Canada.³⁷

Exploring options for including existing fee-for-service providers in preventative services is also recommended. Options include making the Non-Insured Health Benefits process more user-friendly and facilitating rapid reimbursement for private practice clinics.

In addition to addressing access to oral health care providers, there are opportunities to coordinate the services of other health care providers. For example, a public health nurse or primary care provider could provide oral health promotion, caries risk assessments, and anticipatory guidance and referral to oral health care during routine contact such as during immunization clinics, prenatal and postpartum assessments or well child assessments.

Planning for human resources requires balancing strategies that will have impact over the long term with strategies that address immediate community needs. Some of the long-term strategies take significant time to implement fully; therefore, early planning is important.

The following Human Resources recommendations will contribute to the goal of improving oral health for First Nations and Aboriginal children and their caregivers and families in BC:

- 6.1 Improve the cultural competency of oral health care providers:
 - Provide cultural competency training for oral health care providers who work or may work with First Nations and Aboriginal populations.
 - Incorporate cultural competency training into the curriculum design of training programs for all oral health care providers.
- 6.2 Increase the number of First Nations oral health care providers:
 - Promote oral health care careers in communities, elementary schools, middle schools and high schools.
 - Promote laddering or mentoring of First Nations and Aboriginal oral health care providers.
- 6.3 Explore options for salaried and contracted oral health care providers.
- 6.4 Explore options for a community service year for new dentists in remote locations, and nurture the sites where they will work.
- 6.5 Explore practicum placement options for dental residents and dental hygienists in First Nations communities.

Bachelor of Oral Health in New Zealand

New Zealand has a long history of providing oral health services through dental therapists and in more recent years via dental hygienists. The training of these professionals has changed significantly over the past decade. New dual-degree programs in dental therapy/hygiene prepare graduates to register as dental therapists and/or dental hygienists and to work in both private and public health settings. These programs include a social science emphasis and education on Maori history, culture and society. Students graduate with skills required for health promotion in a multicultural environment.

Source: Coates, D. E., Kardos, T. B., Moffat, S. M., & Kardos, R. L. (2009). Dental therapists and dental hygienists educated for the New Zealand environment. *Journal of Dental Education*, 73(8), 1001-1008.

- 6.6 Explore options for appropriate training for dental therapists.
- 6.7 Explore options for including fee-for-service dentists in prevention services.
- 6.8 Explore options for oral health care by other health care providers:
 - Consider incorporating oral health training into paediatric and family medicine residency programs.
 - Consider incorporating oral health promotion and screening into routine public health visits (e.g., immunizations).
- 6.9 Explore opportunities for ongoing coalition building and collaboration for professional development.

Conclusion

Oral health is essential to overall health and wellness. Poor oral health in children can lead to dental decay, serious infection, poor nutrition, and the misalignment and crowding of permanent teeth. It can also cause pain, which can affect sleep, concentration and learning. In addition, poor oral health can lead to periodontal disease, which has been explored as a potential contributing factor in a number of conditions including diabetes, respiratory disease, heart disease, preterm birth and low-birth-weight babies.

Aboriginal children in BC have significantly poorer oral health than non-Aboriginal children, and First Nations children living on-reserve have even poorer oral health than Aboriginal children living off reserve. Healthy Smiles for Life: BC's First Nations and Aboriginal Oral Health Strategy has been designed to guide public health and community efforts to improve the oral health of First Nations and Aboriginal children aged 0-18 and their caregivers in BC. The six strategic directions in this strategy offer a comprehensive, multi-level, evidence-informed set of recommendations to consider when developing and coordinating oral health programs and policies. The strategic directions are (1) oral health promotion, (2) prevention and identification of caries risk, (3) access to treatment, (4) leadership and collaborative action, (5) surveillance, monitoring and evaluation, and (6) human resources. Community capacity and population needs will determine which components of the strategy can be implemented at the regional and the local level.

The following next steps are required for moving Healthy Smiles for Life forward:

1. Confirm the tripartite lead for the implementation of the strategy.
2. Develop an implementation plan.
3. Develop a dissemination plan.

Implementation of this strategy requires continued collaboration between tripartite partners, oral health care providers, and First Nations and Aboriginal communities. As it “takes a community to raise a child,” collective community efforts are essential to successfully implementing this strategy and to improving the oral health of children. First Nations and Aboriginal communities in BC have significant capacity to lead changes in oral health and to foster equity, dignity and well-being for their children and families.



Recommendations

Strategic Direction 1: Oral Health Promotion

- 1.1 Promote oral health as part of a holistic, healthy living strategy:
 - Work with other health care providers to incorporate oral health promotion into their practice (e.g., physicians, nurses and midwives).
 - Work with Elders and community stakeholders to promote oral health within other healthy living initiatives and within community culture and celebrations.
- 1.2 Promote oral health awareness and oral health practices through knowledge exchange. Provide culturally relevant oral health education:
 - For communities as a whole
 - For pregnant and postpartum women, caregivers and families of children, and children up to 18 years of age
 - For health care providers who work or may work with Aboriginal populations.
- 1.3 Use multidisciplinary promotion efforts that are integrated into other programs and settings such as Aboriginal Head Start programs, public health immunization, public health and community home visiting programs, maternal child health programs and Fetal Alcohol Spectrum Disorder (FASD) programs – for example:
 - Implement dental-healthy snack and food policies.
 - Establish juice-free events/zones and sugary beverage policies.
 - Develop tobacco control policies.
 - Distribute oral hygiene products (fluoride toothpaste, brushes, floss).

Strategic Direction 2: Prevention and Identification of Caries Risk

- 2.1 Assess prenatal clients' knowledge of oral health, provide anticipatory guidance for oral health care and refer for dental care as needed:
 - Provide oral examination and assessment of oral hygiene practices and knowledge.
 - Provide oral health information through motivational interviewing and in alignment with cultural beliefs and Indigenous knowledge.
 - Provide oral hygiene supplies (brushes, fluoride toothpaste, floss).
 - Consider/establish a program to distribute decay preventive products (e.g., Xylitol gums, fluoride rinses).
 - Facilitate access to oral health care.
- 2.2 Offer regularly scheduled caries risk assessments to identify infants and children at risk of decay, and provide one-to-one parent and caregiver education and other supportive strategies to reduce risk:
 - Facilitate knowledge exchange of oral hygiene practices for First Nations and Aboriginal children, caregivers and families.
 - Consider/establish a program to distribute decay preventive products (e.g., Xylitol gums, fluoride rinses) for mothers and caregivers.
- 2.3 Assess infants and preschool age children for dental health and provide preventive services during routine health contact, including both public health and primary care:



- Include oral health assessment and information for parents/caregivers.
 - Provide anticipatory guidance on dental health (e.g., teeth eruption, oral hygiene and transfer of oral bacteria, healthy snacks, feeding practices).
 - Provide oral hygiene supplies (brushes, fluoride toothpaste, floss).
 - Offer brushing programs.
 - Support awareness and uptake of the first dental visit.
 - Offer fluoride varnish programs.
- 2.4 Provide school-age preventive services:
- Embed oral health education in broader health information and education.
 - Establish school-based policies for healthy snacks and reduction of sugary and acidic beverages.
 - Develop school brushing programs (provide oral hygiene supplies: brushes, fluoride toothpaste and floss).
- Offer sealant programs.
 - Offer fluoride programs (e.g., varnish or rinse).
- 2.5 Provide community-based preventive services:
- Establish community-based policies for healthy snacks and reduction of sugary and acidic beverages, including in early childhood program settings.
 - Promote community awareness of oral health and Indigenous practices to support oral health.
 - Promote community celebrations for caries-free children.
- 2.6 Explore options for community or school water fluoridation:
- Identify opportunities for and barriers to fluoridation.
 - Facilitate community awareness of the benefits of fluoridation.
 - Explore community infrastructure to support fluoridation.
 - Explore resources and training required to facilitate fluoridation.

Strategic Direction 3: Access to Treatment

- 3.1 Explore alternate dental care delivery models, and coordinate dental staff to support access to oral health care and basic restorative services.
- Explore opportunities to coordinate the different skill sets of certified dental assistants (CDAs), registered dental hygienists (RDHs), dental therapists, denturists and dentists.
- 3.2 Enhance public health oral health care in clinic, school and community settings as appropriate:
- Cleaning and scaling
 - Fluoride application
 - Sealant application
 - Alternative restorative treatment (ART)
 - Extraction of primary (baby) teeth
 - Fillings and restorations.
- 3.3 Facilitate greater access to oral health treatment:
- Explore options for salaried dental professional.
 - Explore community needs, human resource needs and options for dental operatory clinics.
 - Consider medical transportation as needed.
 - Explore opportunities for dental health professionals other than dentists and denturists to bill for insurable services.

Strategic Direction 4: Providing Leadership and Collaborative Action

- 4.1 Include First Nations and Aboriginal communities in planning and developing resources and policies, and in delivering programs:
- Incorporate Indigenous Knowledge into resources, policies and programs.
 - Facilitate knowledge exchange, build partnerships between oral health care providers and First Nations and Aboriginal leaders and community members, and enlist community champions.
 - Enlist and train community members to provide prevention services.
- 4.2 Leverage existing policies that support oral health, or develop and promote implementation of new policies to support oral health, such as:
- Healthy food policies
 - Tobacco control initiatives
 - Taxes on sugar-sweetened beverages and confectionary goods.
- 4.3 Strengthen community capacity to support oral health and develop partnerships with key community members:
- School teachers and principals
 - Child care centre staff
 - Primary care providers, support workers and health educators
 - Other community members who work with pregnant women, families and children aged 0-18.

Strategic Direction 5: Surveillance, Monitoring and Evaluation

- 5.1 Monitor the oral health of First Nations and Aboriginal children and their caregivers and families:
- Establish documentation and reporting standards.
 - Develop indicators that are meaningful to First Nations and Aboriginal people and determine a baseline and targets for each indicator in collaboration with the Tripartite Health Indicators Planning Committee, Strategic Health Knowledge and Information.
 - Coordinate access to health authority public health dental programs and COHI and NIHB datasets.
 - Conduct dental screening or surveys, and monitor trends and changes.
- Collect data in accordance with First Nations Health Information Governance and in consultation with community members.
 - Work with First Nations and Aboriginal people to ensure that reporting on oral health trends is done in a culturally relevant manner.
 - Explore opportunities for community-driven research.
- 5.2 Monitor and evaluate progress within all oral health programs:
- Establish an evaluation framework as one component of all oral health programs.
 - Collect data in accordance with First Nations Health Information Governance.
 - Develop an information management system for monitoring oral health program outputs and outcomes and client care.



- Work with First Nations and Aboriginal people to ensure that reporting on evaluation results is done in a culturally relevant manner.
- 5.3 Evaluate progress toward the goals of the First Nations and Aboriginal Oral Health Strategy:
- Establish an overall evaluation framework for the First Nations and Aboriginal Oral Health Strategy.
 - Work with First Nations and Aboriginal people to ensure that reporting on the progress of the First Nations and Aboriginal Oral Health Strategy is done in a culturally relevant manner.
 - Use evaluation results to inform program planning and allocation of resources.

Strategic Direction 6: Human Resources

- 6.1 Improve the cultural competency of oral health care providers:
- Provide cultural competency training for oral health care providers who work or may work with First Nations and Aboriginal populations.
 - Incorporate cultural competency training into the curriculum design of training programs for all oral health care providers.
- 6.2 Increase the number of First Nations oral health care providers:
- Promote oral health care careers in communities, elementary schools, middle schools and high schools.
 - Promote laddering or mentoring of First Nations and Aboriginal oral health care providers.
- 6.3 Explore options for salaried and contracted oral health care providers.
- 6.4 Explore options for a community service year for new dentists in remote locations, and nurture the sites where they will work.
- 6.5 Explore practicum placement options for dental residents and dental hygienists in First Nations communities.
- 6.6 Explore options for appropriate training for dental therapists.
- 6.7 Explore options for including fee-for-service dentists in prevention services.
- 6.8 Explore options for oral health care by other health care providers:
- Consider incorporating oral health training into paediatric and family medicine residency programs.
 - Consider incorporating oral health promotion and screening into routine public health visits (e.g., immunizations).
- 6.9 Explore opportunities for ongoing coalition building and collaboration for professional development.

Definitions

The following definitions are intended to clarify the terms used within this strategy.

Alternative Restorative Treatment (ART)

Alternative restorative treatment is a procedure for treating caries involving the removal of soft, demineralised tooth tissue using only a hand instrument, followed by restoration of the tooth with an adhesive restorative material. ART is used in COHI to temporarily fill cavities in very young children, in order to relieve pain and delay the need for invasive dental treatment. ART can be provided by dental therapists and dentists.

Caries

Caries is defined as the presence of tooth decay. This complex disease involves the transmission of infectious bacteria, dietary habits and oral hygiene.³⁸ Children often acquire the bacteria that cause caries from a primary caregiver before age 3.³⁹

Certified Dental Assistant (CDA)

A certified dental assistant (CDA) assists the dentist and provides patient education and comfort, patient care procedures and office administration services. A CDA prepares the patient for treatment, sterilizes instruments, passes instruments during the procedure, holds a suction device and effectively acts as the dentist's extra hands.⁴⁰

Children

For the purposes of this strategy, children are defined as individuals between the ages of 0 and 18 years.

COHI Aide

A COHI Aide is a community member who supports and contributes to the Children's Oral Health Initiative (COHI) team. A COHI Aide

provides services as directed by a dental therapist, dental hygienist or designated dental professional. COHI Aides act as the main link between the dental professional and the First Nations community.

Cultural Competence

Cultural competence includes a set of congruent behaviours, attitudes and policies that enable professionals and organizations to work effectively in cross-cultural situations.⁴¹

Cultural Responsiveness

Cultural responsiveness focuses on the ability of the whole system or institution to be culturally competent.⁴² It involves improving professional attitudes, knowledge and behaviours (the people component), in addition to practices, strategies, plans, policies and procedures, standards, performance management and remuneration mechanisms (the institutional component).

Culture

Culture represents the values, norms and traditions that affect how individuals of a particular group perceive, think, interact, behave and make judgments about their world.⁴³

Dental Hygienist

See Registered Dental Hygienist.

Dental Therapist

A dental therapist is a licensed dental professional who has specialized training in treating the teeth of children and adults, including performing local anaesthesia, undertaking restorations, cleaning teeth and taking radiographs. Local dental regulations determine the duties therapists are permitted to perform.

Dentist

A dentist, also known as a dental surgeon, is a health care professional who specializes in the diagnosis, prevention and treatment of diseases and conditions of the oral cavity.

Denturist

A denturist is professional who specializes in the manufacturing and fitting of denture prosthetics. Denturists have the professional designation of Registered Denturist (RD).⁴⁴

First Nations and Aboriginal

Aboriginal is a collective term used to describe the three constitutionally recognized Indigenous populations in Canada – “Indians” (First Nations), Métis and Inuit. While the term Aboriginal is commonly accepted, identifying each of these populations specifically by name is preferable where appropriate. The phrase First Nations and Aboriginal will be used throughout this document, indicating that the topic is inclusive of all First Nations, Métis and Inuit people in British Columbia.

Health Authorities

For the purposes of this strategy, the term health authorities refers to the five regional health authorities in BC and the First Nations Health Authority.

Indigenous Knowledge

Indigenous knowledge includes practical skills, technologies, traditions and beliefs specific to a local Indigenous community or culture. This knowledge accumulates through generations of people living in a specific environment. The transfer of Indigenous knowledge from generation to generation may be through stories, legends, songs and art.⁴⁵

Oral Health Care

For the purposes of this strategy, oral health care refers to the services provided by oral health care providers, including certified dental assistants, registered dental hygienists, dental therapists, dentists and denturists. Some oral health services may also be provided by non-oral health care professionals, such as COHI Aides, public health nurses and Head Start staff. Oral health care encompasses everything from promotion and prevention services to treatment services.

Public Health

Public health is defined as an organized activity of society to promote, protect, improve, and when necessary, restore the health of individuals, specified groups, or the entire population.⁴⁶ For the purposes of Healthy Smiles for Life, public health refers to health promotion and prevention services delivered by health authority staff, dental therapists and the Children’s Oral Health Initiative (COHI).

Registered Dental Hygienist (RDH)

A registered dental hygienist (RDH) is a licensed dental professional who specializes in oral health education and promotion, preventive oral health and clinical therapy.⁴⁷ An RDH assesses oral health and uses assessment data to formulate a dental hygiene diagnosis and a treatment plan, followed by implementation and evaluation of the service. Local dental regulations determine the scope of practice of a RDH. RDHs are also referred to as dental hygienists in this document.

Tripartite

For the purposes of this strategy, tripartite refers to representatives of First Nations; the provincial government and regional health authorities; and the federal government.

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Appendix

The following table summarizes the key oral health services that can be provided by oral health care providers in BC.ⁱⁱⁱ

Key Service	COHI Aide	CDA	RDH	DT	Dentist	Denturist
Promoting oral health	Yes	Yes	Yes	Yes	Yes	Yes
Educating and instructing	Yes	Yes	Yes	Yes	Yes	Yes
Applying fluoride varnish	Yes	Yes	Yes	Yes		
Assisting chair-side	Yes	Yes	Yes	Yes		
Assessing oral health			Yes	Yes	Yes	
Using assessment data to formulate a dental hygiene diagnosis			Yes			
Formulating an oral diagnosis in emergency cases only				Yes		
Diagnosing an oral disease or disorder					Yes	
Removing stain		Yes	Yes	Yes	Yes	
Applying desensitizing agents		Yes	Yes	Yes	Yes	
Applying anticariogenic and antimicrobial agents			Yes	Yes	Yes	
Debriding, scaling and root planing			Yes	Yes	Yes	
Applying sealants		Yes	Yes	Yes	Yes	
Applying preventive resin materials		Yes	Yes	Yes	Yes	
Placing and removing temporary restorations			Yes	Yes	Yes	
Providing (ART)				Yes	Yes	
Administering local anaesthetic			Yes	Yes	Yes	
Taking and developing radiographs (X-rays)		Yes	Yes	Yes	Yes	
Performing restorative treatments				Yes	Yes	
Performing simple extractions				Yes	Yes	
Placing sutures				Yes	Yes	
Providing post-surgical care				Yes	Yes	
Draining infected teeth				Yes	Yes	
Recementing crowns				Yes	Yes	
Performing pulpotomy and fitting stainless steel crowns on baby teeth				Yes	Yes	
Providing advanced restorative procedures					Yes	
Providing treatment for oral injuries					Yes	
Administering or prescribing medication					Yes	
Prescribing, dispensing and fitting dental appliances					Yes	
Fabricating and fitting full and partial dentures and dentures over implants						Yes
Relining, rebasing and repairing partial dentures and dentures over implants						Yes

ⁱⁱⁱ COHI Aide = Children's Oral Health Initiative Aide; CDA = certified dental assistant; RDH = registered dental hygienist; DT = dental therapist

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Tripartite First Nations Health Plan



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